

COMMAND AND CONTROL OPTIONS FOR JOINT LOGISTICS

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USAWC STRATEGY RESEARCH PROJECT

COMMAND AND CONTROL OPTIONS FOR JOINT LOGISTICS

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ABSTRACT

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The 2004 *Department of Defense Logistics Transformation Strategy* identified the need for the development of an organizational structure to provide oversight of joint logistics for deployed forces. U.S. Joint Forces Command (USJFCOM) proposed four overarching functions that joint logistics must accomplish to truly enable the Joint Force Commander (JFC): joint logistics command and control (C²); logistics collaboration; joint support planning; and joint support execution and tracking. USJFCOM has also identified fifteen joint logistics “seams and gaps” which recur without fail in exercises and operations alike. This study analyzes four proposed logistics C² organizational constructs to determine the optimal design to perform these four functions while mitigating the seams and gaps. The Joint Force Commander can tailor the recommended solution to meet the needs of -- and to leverage the logistics formation assigned to -- his command.

COMMAND AND CONTROL OPTIONS FOR JOINT LOGISTICS

Sound logistics forms the foundation for the development of strategic flexibility and mobility. If such flexibility is to be exercised and exploited, military command must have adequate control of its logistic support.

-- RADM Henry E. Eccles, *Logistics in the National Defense* (1959)

The 2004 *Department of Defense Logistics Transformation Strategy* identified the need for the development of an organizational structure to provide oversight of joint logistics for deployed forces.¹ U.S. Joint Forces Command (USJFCOM) proposed four overarching functions that joint logistics must accomplish to truly enable the Joint Force Commander (JFC): joint logistics command and control (C²); logistics collaboration; joint support planning; and joint support execution and tracking.² USJFCOM identified fifteen joint logistics “seams and gaps” which recur without fail in exercises and operations alike.³ This study analyzes four proposed logistics C² organizational constructs to determine the optimal design to perform these four functions, while mitigating the seams and gaps. The Joint Force Commander can tailor the recommended solution to meet the needs of -- and to leverage the logistics formation assigned to -- his command.

Then and Now: Why the Time is Right to Address to Joint Logistics C2

The United States military is constantly evolving to meet the challenges of an ever-changing global environment. The collapse of the Soviet Union two decades ago marked the termination of the Cold War and ushered in a new era of regional conflicts and the threat of non-state actors.⁴ Large scale conventional warfare, once seen as practically inevitable, now seems a remote possibility in the near future, with those nations capable of waging such wars resigned to the reality that a full-scale conflict

between major powers is unwinnable. Globalization is pulling nations together with economic reliance, and the prospects for cooperation and stability tend to be somewhat optimistic.⁵ The world economy, however, still suffers from the strain of over-indulgence, and the United States' economy is rapidly approaching the fail-safe point due to excessive government spending.⁶ The result will most-assuredly be a tightening of pocketbooks, a call for efficiencies and a smaller Department of Defense budget to relieve the federal government's overall financial crisis. This will come simultaneously as the United States recovers from extended conflicts in Iraq and Afghanistan as well as continued regional military support around the globe. The world, however, will not remain without conflict and the United States Department of Defense will continually be called upon to intervene in global crises to protect the interests of the nation.⁷

To do this, the United States military must focus on efficiencies that do not degrade its ability to fight and win the nation's wars. If globalization fails to be the stabilizing force to reduce global tensions, the U.S. military must be ready to deploy and maximize economy of force to meet future challenges. One such efficiency can be derived from the practice of military jointness: the sharing or apportionment of common assets to obtain operational and strategic efficiencies. Jointness allows the National Command Authority to tailor military responses to meet a specific and unique requirement, leveraging the desirable characteristics each Service component capability provides. Efficiency is enhanced when a Combatant Commander (CCDR) or other designated Joint Force Commander has the flexibility to drive employment of assigned forces regardless of Service component origin.⁸

The Need for Joint Logistics

Joint war-fighting operations proved instrumental in the economy of the air, ground and sea forces, but did little to affect the economy or efficiency of each respective Service component's logistical support to its contributed forces. Traditionally, the military followed the principle that defines logistics as both a Service and a national responsibility.⁹ Adherence to this principle consistently contributed to Service component and national support redundancies, which proved costly in the form of excess reliance on personnel, supplies and equipment. Notable exceptions to supporting Service-specific logistics infrastructure was the development and success of the Defense Logistics Agency (DLA) and the United States Transportation Command (USTRANSCOM), which proved that adherence to joint logistics principles was cost-beneficial as well as strategically and operationally efficient.¹⁰

During the first months of Operation IRAQI FREEDOM, battlefield distribution was a challenge in the southern part of the Iraqi Theater of Operations. As a result, the 377th Theater Support Commander's Director of Support Operations and the Coalition Forces Land Component Command's Chief of Sustainment integrated logistics functions with the goal of providing rapid and timely flow of forces, materiel and sustainment while simultaneously reducing the logistics footprint. Their initiative to integrate logistics support efforts created a single Theater Support Command Center (TSCC) to better manage and coordinate Army and Marine Corps Logistics.

The TSCC achieved big dividends by pulling together functions traditionally performed by individual Services, with Service stovepipes. Integrating logistics functions, especially Class III (fuel) and Class V (ammunition), reduced traditional coordination measures, as information from activity cells fed directly to the functional fusion area. Integrating the functional areas reduced the time required to gather and fuse information, and therefore provided greater situational awareness, faster, to the command center.

The TSCC synchronized, prioritized, directed, integrated and coordinated the common-user and cross-service logistics functions necessary to accomplish the joint theater mission.

--Iraq, March 2003 to May 2003: Joint Combined Combat Operations¹¹

United States Joint Forces Command identified four overarching functions of joint logistics as defined in their joint experimental study *DOTMLPF Change*

*Recommendation (DCR) Operationalizing Joint Logistics.*¹²

I. Joint Logistics Command and Control (C2)

Joint logistics command and control is the exercise of authority and direction by a JFC over the common support required by assigned and attached forces from two or more military departments. It is the means to achieve unity of effort through the effective employment of available resources. This process includes planning for the execution of directive authority for logistics (DAFL) by the combatant commanders and the use of common user logistics and executive agent designation procedures to establish a JFC concept for logistics support.¹³

II. Logistics Collaboration

This function involves the creation of processes that enhance the visibility of logistic resources across the components, DOD agencies, and other participating partners (interagency, multinational). Links between operations, intelligence, and logistics decisions are shared. Operations, intelligence and logistics collaboration provide the operator and the logistician with simultaneous access to multiple perspectives of shared information within a web-based environment.¹⁴

III. Joint Support Planning

Joint support planning refers to the effective identification of joint or coalition requirements and the planning needed to meet the requirements. The objective of joint support planning is to fully integrate support, intelligence, and operation planning considerations in all joint analytical and planning activities across the operational level. Joint support planning processes should cover the three JFC decision cycle event horizons: current operations (“what is”); future operations (“what if”); and future plans (what’s next”).¹⁵

IV. Joint Support Execution and Tracking

Joint support execution and tracking involves managing the commitment and use of resources to support joint and coalition operations. This function is essential to providing rapid and precise response; it must monitor dynamic situations and provide accurate information to decision makers. Logisticians must be able to rapidly compare sustainment estimates derived from the joint support planning process with actual

consumption data and tactical reporting systems to prioritize resource allocation and to best support logistics operations.¹⁶

USJFCOM collects After Action Review data from both ongoing Combatant Command operations as well recommendations from joint exercises. Using the four overarching joint logistics functions defined above, USJFCOM identified fifteen specific joint logistics command and control capabilities necessary to effectively manage joint logistics:^{17 18}

1. Centralized Joint Planning: ability to conduct joint logistical planning in concert with joint operational planning.
2. Efficient Adjudication of Conflicting Priorities: ability to identify current and potential logistical conflicts and the means to mitigate them.
3. Maintenance of Situational Awareness: ability to have visibility of subordinate logistics unit locations, actions and capabilities and the operational missions they are required to support.
4. Timely ID of Requirements and Shortfalls: ability to identify logistical requirements to support the Joint Force Commander's objectives and the means to assess where support shortfalls exist.
5. Clear Understanding of Component Capabilities: ability to incorporate personnel from Service components and national partner agencies to garner a collective organizational understanding of combined functions and capabilities.
6. Ability to Synchronize Component Logistical Capabilities: ability to link support capability, regardless of providing Service component, to the necessary support requirements.

7. Integrated Logistics Processes: ability of the staff to understand and link the procedures and capabilities of Service component logistics processes to build the logistics common operating picture and associated actions.
8. Integrated Distribution System: ability to maximize joint deployment and distribution efforts through integration of all available assets.
9. Cross-Component Asset Visibility: ability to see and understand what logistical support assets are available from other Service components and then use the knowledge in logistics planning and execution.
10. Improved Capability to Direct Resources: ability to develop decision-making processes to lawfully direct a joint logistics action.
11. Documented Joint Logistics Procedures (SOPs): ability to develop, refine and maintain clear guidelines and procedures that define processes and train personnel how the organization functions.
12. Coordinated Operational and Centralized Contracting Support: ability to ensure Service component contracting agents do not compete with each other for supplies and services and to economize contracts where practicable to gain efficiencies and cost savings.
13. Single Logistics Agent with Flexible and Responsive Organizational Structure: ability to bring the staff planning and joint logistics expertise to a single point of contact for decision-making and lateral coordination. In a Staff option, it would be the J4. In a Command option, it would be the Commander.

14. Effective Joint OPS/LOG Coordination and Integration: ability to link command guidance, operational planning and logistics planning for a synchronized and seamless execution of logistical support.
15. Improved Cross-Component Collaboration: ability to facilitate coordination and planning across Service components; closely linked with component asset visibility.
16. Legal Authorities for Joint Logistics

The complexity and extent of joint force logistics requirements makes necessary the clear and concise definition of responsibilities and authorities. Accordingly, legal command authority in USC Title 10, Chapter 6 compliments the concept of single entity authority to coordinate and control joint logistics supporting forces assigned to a Joint Force Commander.¹⁹

Command Authority of Combatant Commanders. - Unless otherwise directed by the President or the Secretary of Defense, the authority, direction, and control of the commander of a combatant command with respect to the commands and forces assigned to that command include the command functions of -

(1) giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command, including authoritative direction over all aspects of military operations, joint training, and logistics;

(2) prescribing the chain of command to the commands and forces within the command;

(3) organizing commands and forces within that command as he considers necessary to carry out missions assigned to the command;

(4) employing forces within that command as he considers necessary to carry out missions assigned to the command;

(5) assigning command functions to subordinate commanders;

(6) coordinating and approving those aspects of administration and support (including control of resources and equipment, internal organization, and training) necessary to carry out missions assigned to the command.²⁰

Hierarchy of Joint Logistics

Service components retain responsibility for the resourcing of support for their specific Service forces along component lines, and components with assigned *Executive Agency* functions retain responsibility for their respective common user logistics support requirements. *DoD Directive 5101.1* defines Executive Agency as:

The Head of a DoD Component to whom the Secretary of Defense or the Deputy Secretary of Defense has assigned specific responsibilities, functions, and authorities to provide defined levels of support for operational missions, or administrative or other designated activities that involve two or more of the DoD Components.²¹

For example, the Army is designated as the Executive Agent for the ground distribution of Class III (Fuel) to the other Service components. Accordingly, it is resourced with assets and force structure to provide this support to the other Service components when required. The use of Executive Agency consistently proves its effectiveness by defining which Service component or DoD agency has the lead for *Common User Logistics* (CUL). The success of the Defense Logistics Agency as the procurer of CUL assets and of USTRANSCOM as the DoD distribution process owner show the benefits of Executive Agency. Additionally, Executive Agency coupled with the role of Inter-Service Support Agreements (ISSA) outlined in DoD Instruction 4000.19 *Inter-service and Intra-governmental Support* provides clear guidance for Services working together at the component level.²²

Joint Force Commanders require clearly stated command and control authorities, and in the considerations of logistics, the flexibility of *Directive Authority for Logistics*

(DAFL) allows Combatant Commanders or their designees to redistribute critical logistics assets among assigned Service components to accomplish critical mission support requirements.

Retaining Directive Authority for Logistics at the Combatant Commander level complies with the legal requirements contained in *USC Title 10*, which states that DAFL must remain under Combatant Commander-control but allows the CDR to delegate the directive authority for common user support commodities one level down to a subordinate Joint Commander.²³

Joint Logistics as the Sustainment Joint Function

USC Title 10 provides the authorities for Joint Force Commanders to acquire and distribute support while DoD Directive 5101.1 and DoDI 4000.19 clearly define the role of Service components and their responsibilities with Executive Agency and Inter-Service Support Agreements. What remains elusive, however, is a flexible and adaptive single logistics command and control agent to serve as the synchronizer of joint logistics planning, distribution, asset visibility and reporting.²⁴ Without such a synchronizing agent, supplies and equipment from multiple Service components and national partners, including supplies and equipment entering the theater from multinational partners, will flow independently along parallel and inefficient lines of communication. This lack of coordination routinely results in competition with each other for the use of Aerial Ports of Debarkation (APOD) and Sea Ports of Debarkation (SPOD) facilities.²⁵ Additionally, failure to synchronize ground movements along busy road and rail networks creates unnecessary challenges for the prioritization of critical requirements. If joint forces are required to enter a theater under non-permissive conditions, logistics synchronization

and efficiency are absolutely critical to give the Joint Force Commander total control over priorities of movement and distribution of sustainment to his war-fighting units. A single logistics synchronizing agent is also paramount to serve as the Joint Force Commander's advocate to articulate theater requirements to the CONUS industrial base through national partners such as DL A and USTRANSCOM in coordination with the supporting Combatant Command J4. Further, without single agent logistics control, there is simply not an effective or efficient means to track supplies and equipment transitioning between the strategic, operational and tactical distribution systems.²⁶ Poor in-transit visibility and the inability to prioritize may result in a slowdown or stoppage of critical sustainment to the joint war-fighter. In short, a single logistics command and control element is necessary to tie together the needs of the joint war-fighter, the support of Service component logistics units and the capabilities of national and coalition partners.²⁷

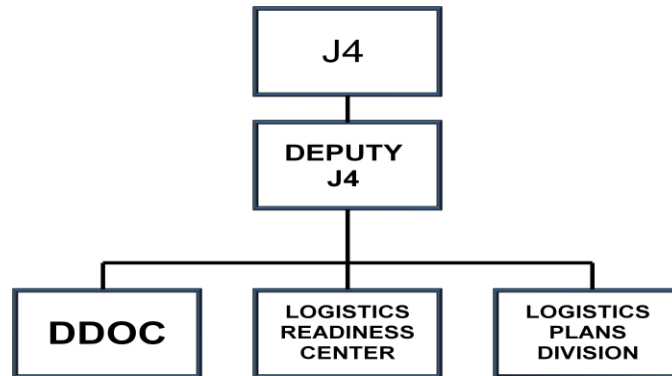
With the need and criticality defined, USJFCOM identified options for agents capable of joint logistics command and control. The options revolve around two basic concepts: 1) Staff coordination lead by the J4 of a Combatant Command or 2) a Command option executed by a designated Service component's senior logistics formation. The option of leaving the joint logistics organizational structure status quo, that is leaving support to the joint force as a Service component responsibility alone, is still an option.²⁸

The four single joint logistics agent options are:²⁹

1. J4 Plus a Deployment and Distribution Operations Center (DDOC)
2. Enhanced J4
3. Joint Force Support Component Command (JFSCC)

4. Combined Logistics Coordination Center (CLCC)

Option 1: J4 with a Deployment and Distribution Operations Center



The extent of the J4 manning varies between Combatant Commands and could be augmented with additional personnel as required to support the volume of work. The structure is comprised of a J4 and his/her deputy and three sub-branches: DDOC, Logistics Readiness Center, and Logistics Plans Division. The DDOC base is comprised of movements control personnel assigned to the J4 and augmented with personnel from USTRANSCOM.³⁰ The DDOC serves as the hub for strategic mobility, distribution operations and in-transit visibility. The Logistics Readiness Center monitors and manages petroleum and munitions status and requirements, supplies and services, maintenance status and issues, engineering, and medical logistics. The Logistics Plans Division oversees logistical planning, inclusive of logistics planning in support of multinational partners.³¹ Without significant augmentation, however, this organizational structure has limited manpower and may not be robust enough to support large-scale logistical operations. The assessment below compares the available organizational design with the USJFCOM critical joint logistics command and control required capabilities.

1. Centralized Joint Planning: The *J4 Plus DDOC* organizational structure meets the requirements with close linkage of the Joint Force J4 and J3 to synchronize operations and logistics.
2. Adjudicate Conflicting Logistical Priorities: With linkage to the J3 and Joint Force Commander, the J4 would be able to efficiently perform this function.
3. Maintenance of Joint Logistics Situational Awareness: This function can be accomplished by the J4 through the use of a Logistics Common Operating Picture (LOGCOP), with supported Service component and multi-national partners providing their respective LOGCOP input for consolidation. The maintenance of the LOGCOP would fall upon the DDOC since that entity is responsible for maintaining situational awareness of the viability of ground and air lines of communication, in-transit visibility and the status of APODs and SPODs.
4. Timely ID of Requirements and Shortfalls: The *J4 Plus DDOC* has the basic structure to perform this function with adequate reporting and coordination with subordinate components.
5. Maintaining a Clear Understanding of Component Capabilities: The diversity of the J4 staff composition and the representation of the Service component augmentation to this structure, both as additional staff and liaison personnel, would support this function.
6. Ability to Synchronize Component Logistical Capabilities: This function may be limited by the structure of the *J4 Plus DDOC* design, with the J4 and Deputy J4 being the single conduits between the DDOC, Logistics Readiness Center and Logistics Plans Division. As discussed in the next section, the *Enhanced J4*

construct includes a fusion center for synchronization, which provides the conduit not readily available in the *J4 Plus DDOC* structure.

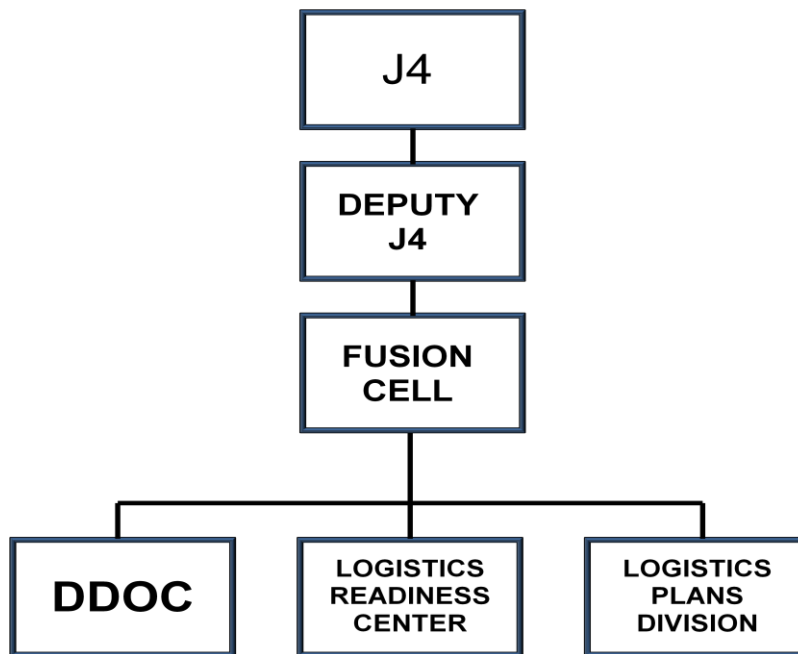
7. *Integrated Logistics Processes*: This function may also be limited by the lack of a fusion center. Linkage between the DDOC and the Logistics Readiness Center, as well as synchronization with Service component logistics agents, is required to ensure all processes are fully integrated and productive.
8. *Integrated Distribution System*: This process is fully supported through this option's DDOC. The DDOC would serve as the central coordinating element for in-transit visibility and theater distribution across all Services, inclusive of distribution support to multi-national partners where practicable.
9. *Cross- Component Asset Visibility*: This function may prove to be a challenge for this construct, contingent on Service component operator augmentation and the availability of Service-specific standard management information systems equivalent to the U.S. Army's family of STAMIS. Service component management information systems are not organic to the standard Combatant Command J4 construct so supported Service components would be required to provide the systems and trained operators to meet this identified joint logistics requirement gap.
10. *Improved Capability to Direct Resources*: This function is supported, contingent on the use of Directive Authority for Logistics (DAFL) as granted by the Combatant Commander and the efficiency of asset visibility. Close coordination with respective Service components is required to ensure that the J4 staff has complete asset visibility and fully understands the operational requirements of each Service component to use their logistical assets and stocks in support of their mission.

11. *Documented Joint Logistics Procedures*: This function is supported with the construct of the *J4 Plus DDOC* because it is a standing organization. The functions of the Logistics Readiness Center and Logistic Plans Division are normally defined in a standardized J4 SOP. The introduction of the DDOC and the requirement to garner Service component linkage with either liaison officers or additional Service-specific augmentees operating Service-specific STAMIS would require enhancements to the standard J4 SOP for contingency operations..
12. *Coordinated Operational and Centralized Contracting Support*: The ability to provide this function is possible if the J4 has oversight of the servicing Contract Support Activity (CSA) or Contracting Support Brigade (CSB). If the servicing Contract Support Activity is under Operational Control (OPCON) or Administrative Control (ADCON) of another organization, the J4 would be reduced to simple monitoring through the use of reports. In the current design, this function is not supported.
13. *Single Logistics Agent with a Flexible and Responsive Organizational Structure*: This function is supportable, with the extent of augmentation being the determining factor in the level of flexibility for surge capacity and Service component logistical expertise.
14. *Effective Joint Operations/Logistics Coordination and Integration*: The *J4 Plus DDOC* design provides excellent potential due to the relationship and working proximity between the Joint Force J3 and the Joint Force J4.
15. *Improved Cross-Component Collaboration*: This function is supported through the J4 lead coordinating virtual logistical boards, centers and cells, to collectively address supply, distribution and security issues affecting overall sustainment of the

joint force. Each Service component logistics chief or key representative would represent the component during all meetings.

Option 1, *J4 Plus DDOC*, supports twelve of the fifteen USJFCOM critical joint logistics C2 functions. The remaining three are: *Ability to Synchronize Component Logistics Capabilities, Integrated Logistics Processes, and Coordinated Operational and Centralized Contracting Support*. All assessed shortfalls are due to the *J4 Plus DDOC* construct not having a fusion center to synchronize actions and enhance situational awareness of J4 internal branches and Service components. The connectivity points are the J4 and Deputy J4, who would be unable to sustain both the internal and external coordination requirements on a full-time basis.

Option 2: Enhanced J4



The significant difference between the *J4 Plus DDOC* and the *Enhanced J4* is the insertion in the latter design of a Fusion Cell to coordinate and synchronize. The Fusion Cell truly adds capability to this design over the *J4 Plus DDOC*, lifting the burden of synchronization from the shoulders of the J4 and the Deputy J4.

Comparing the critical functions of joint logistics to this organizational structure:

1. *Centralized Joint Planning*: This function is fully supported through the Logistics Plans Division. The Fusion Cell enhances centralized joint planning through the robust sharing of information across the three J4 branches.
2. *Efficient Adjudication of Conflicting Priorities*: This design is fully capable of supporting this function through visibility of distribution operations from the DDOC and logistical readiness status and requirements from the Logistics Readiness Center. The Logistics Plans Division provides the Fusion Cell the additional insight of future logistical requirements.
3. *Maintenance of Situational Awareness*: The Fusion Cell is in a perfect position to maintain a Logistics Common Operating Picture (LOGCOP) which provides a clear and concise portrayal of the status of lines of communication, logistics readiness, critical stockage levels of food, fuel, major end items and ammunition, as well as the locations of key logistical and maneuver assets. The challenge facing any logistics common operating picture will be the system on which the operating picture is portrayed. With the Army adhering to Command Post of the Future (CPOF)³² while other Service components and coalition partners rely on their own organic systems, the *Enhanced J4* model would need to maintain a LOGCOP in a format that is viewable by all participating Service components for true situational awareness

across the spectrum of players. At the current time, Command and Control Personal Computer (C2PC) is suitable to fill the requirement because it is Windows®-based and can be shared across multiple workstations. C2PC can display a COP from a Global Command and Control System (GCCS)-based server, upon which additional logistics readiness data can be added, shared and distributed.³³

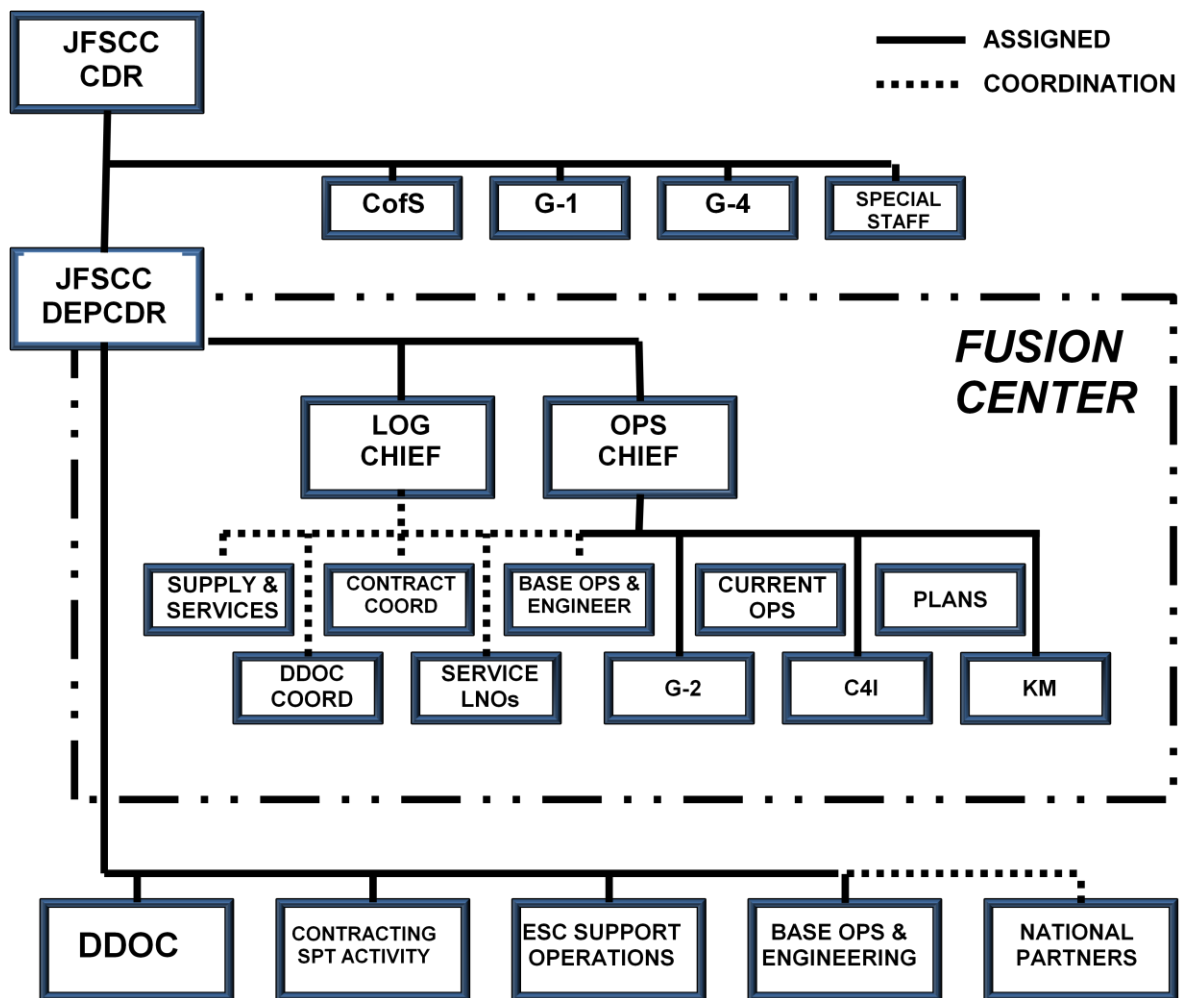
4. *Timely ID of Requirements and Shortfalls*: The Fusion Cell's maintenance of the LOGCOP, interaction with and integration of actions in the DDOC, Logistics Readiness Center and Logistics Plans Division, all support the early identification of requirements and potential shortfalls.
5. *Clear Understanding of Component Capabilities*: This function will be a factor of the J4 staff's ability to understand Service component logistical procedures, functions and available assets. Service component liaison officers, J4 augmentees and the diversity of the personnel on the J4 staff will all influence the effectiveness of the *Enhanced J4* model as will the accuracy of the LOGCOP. The *Enhanced J4* organizational structure is quite capable of performing this function.
6. *Ability to Synchronize Component Logistical Capabilities*: With the Fusion Cell serving as the internal hub and conduit for guidance and directives from the J4 to the Service components, the *Enhanced J4* maintains all the vital touch points to synchronize actions and requirements. With the addition of Directive Authority for Logistics, the *Enhanced J4* has a medley of options to prioritize and direct the most efficient means to logistically support the Joint Force Commander.

7. *Integrated Logistics Processes*: This function is fully supportable through the Fusion Cell. Incorporating the required linkages into Standing Operating Procedures (SOP) will further simplify and clarify the integrating requirements.
8. *Integrated Distribution System*: The DDOC would continue to serve as the central coordinating element for in-transit visibility and theater distribution across all Services. The addition of the Fusion Cell further strengthens this capability through enhancement of synchronization and visibility using the LOGCOP.
9. *Cross-Component Asset Visibility*: This function is supportable contingent on Service component operator augmentation and the availability of Service-specific STAMIS and trained operators, or submission of comprehensive Service component reports to meet this requirement.
10. *Improved Capability to Direct Resources*: This function is supported, contingent on the use of Directive Authority for Logistics and on the efficiency of asset visibility. Close coordination with respective Service components is required to ensure that the J4 staff has complete asset visibility and fully understands the operational requirements of each Service component to use their logistical assets and stocks in support of their mission.
11. *Documented Joint Logistics Procedures*: This function is supported in the *Enhanced J4* due to the ability to develop and maintain Standing Operating Procedures (SOP) inherent to a standing organization.
12. *Coordinated Operational and Centralized Contracting Support*: This function is supportable only with assigned oversight of the servicing Contract Support Activity

13. (CSA) or Contracting Support Brigade (CSB). Without this authority the *Enhanced J4* would be reduced to monitoring and situational awareness through the use of reports, with coordination being conducted through the parent component of the CSA/CSB. In the current design it is not supported.
14. Single Logistics Agent with a Flexible and Responsive Organizational Structure:
The Fusion Cell, as a single point of synchronization, supports this function. The scope of the flexibility/capability depends upon the extent of augmentation and diversity of expertise to understand Service component and coalition partner logistics requirements and capabilities.
15. Effective Joint Operations/Logistics Coordination and Integration: Given the relationship and working proximity between the J3 and the J4, this function is fully supportable through the *Enhanced J4* design. J4 logistics planners must be synchronized with J3 and J5 operational planners, and the J4 Fusion Cell must maintain operational awareness through monitoring of the Operational COP.
16. Improved Cross-Component Collaboration: This function is fully supportable through J4 and Service component participation in boards, centers and cells.

Option 2, *Enhanced J4*, supports fourteen of the fifteen USJFCOM critical joint logistics C2 functions. Only the *Coordinated Operational and Centralized Contracting Support* function is not fully supported.

Option 3: Joint Force Support Component Command (JFSCC)



The *Joint Force Support Component Command* is an ad hoc organization built upon the foundation of an existing Service component logistics headquarters. For the purposes of the USJFCOM Joint Logistics Experimentation Study, the design was based upon augmentation of a U.S. Army Expeditionary Sustainment Command (ESC) Headquarters, allowing it to expand capability to serve as a joint logistics headquarters.³⁴ However, the base organization could be derived from any Service component logistics element capable of serving as the foundation for an augmented joint logistics command and control organization. In a developed theater, an Army

Theater Sustainment Command could serve as a *JFSCC*. This construct could also be based upon a Marine Logistics Group (MLG) or Marine Logistics Combat Element (LCE) depending on the preponderance of the forces in the area of operations. If an Air Force Expeditionary Task Force comprises a significant portion of a joint task force, that component's logistical headquarters could be augmented to serve as a *JFSCC*.³⁵ For the purpose of this study, an Army ESC headquarters will be used to assess the *JFSCC* option.

The significant difference between the *J4 Plus DDOC*, the *Enhanced J4* and the *Joint Force Support Component Command* designs is that the *JFSCC* is lead by a logistics commander as opposed to a staff officer.³⁶ Joint Publication 4.0 *Joint Logistics* defines this option as "Organizational Control" where the Combatant Commander can direct that an existing logistics organization assume the role to provide command and control for joint logistics in support of the joint force or joint task force.³⁷ The role can be relegated to the Service component with the most suitable structure to coordinate logistics, with the design drawing on augmentation from the supported Services to provide the expertise to collaborate on and control logistics for more than one Service component.

Another significant difference between Options 1, 2 and 3 is that the *JFSCC* design is much more robust, bringing additional base capability to the joint construct. Just as with the *Enhanced J4* model, it incorporates a Fusion Center to coordinate logistics across the full spectrum of capabilities.³⁸ The Fusion Center synchronizes the actions of the DDOC, and the G4 directorates of Base Operations and Engineering, Logistics Plans, Contracting, and Multi-National Logistics (when applicable) and Support

Operations. Because the design is built around an existing component logistics unit, the Fusion Center also incorporates the ESC's organic G1, G2, G3, G4 and G6.³⁹

Reviewing the *JFSCC*'s ability to execute United States Joint Forces Command's critical joint logistics functions:

1. *Centralized Joint Planning*: This function is fully supported. The *JFSCC* J3, dual-hatted as the ESC G3, oversees the Plans Division with input from Support Operations, Service component liaison officers (LNO), national partner LNOs such as DLA and Defense Contract Management Agency (DCMA), and in coordination with the Army Service component G3 and G4.⁴⁰ Additionally, the *JFSCC* planning cell receives guidance from the *JFSCC* Commander and policy from the Joint Force J4.⁴¹
2. *Efficient Adjudication of Conflicting Priorities*: If the *JFSCC* Commander has the authority to adjudicate competing priorities amongst Service components on his own authority without having to seek approval from the Joint Force Commander, then the organization is fully capable of performing this function.⁴²
3. *Maintenance of Joint Logistics Situational Awareness*: The *JFSCC* model is fully capable and extremely efficient for performance of this function. The Fusion Center supports interaction with and integration of actions of its branches, Service component actions and requirements through their respective LNOs, and logistics status from organization's Support Operations. The key to success of this function is accurate and timely updates to the LOGCOP by the Fusion Center.⁴³
4. *Timely ID of Requirements and Shortfalls*: This function is supportable. The LOGCOP can be maintained on C2PC for compatibility across all Services. With the

Fusion Center integrating all aspects of logistics support, as well as the positions of Service component units and logistics assets, the anticipation and mitigation of potential unforeseen requirements is significantly improved.⁴⁴

5. Maintaining a Clear Understanding of Component Capabilities: This required function is supportable with the JFSCC model and is enhanced by the augmentation of Air Force, Navy and Marine Corps logisticians to the JFSCC staff and also through the Service component LNOs integrated into the Fusion Center.
6. Ability to Synchronize Component Logistical Capabilities: This function is fully supported in this design with the Fusion Center serving as the hub of knowledge management, meshing requirements with support solutions using the broad range of support assets across Service component capabilities.⁴⁵
7. Integrated Logistics Processes: The JFSCC's Fusion Center supports this function by linking planning, distribution, maintenance, supply and services, base operations and engineering, along with Service component and national partners into a single entity to collectively better manage joint logistics.
8. Integrated Distribution Processes: The linkage of the DDOC to the Fusion Center fully supports this function by ensuring that Service component needs, as well as those of coalition partners, are met through the distribution network managed by the DDOC itself.⁴⁶
9. Cross-Component Asset Visibility: The JFSCC design supports visibility if the organization is augmented with Service component STAMIS and qualified operators.
10. Improved Capability to Direct Resources: This function is supported, contingent on the use of DAFL as granted by the Combatant Commander and the efficiency of

asset visibility. Close coordination with respective Service components and the J4 is required to ensure that the *JFSCC* Fusion Center has complete asset visibility and fully understands the operational requirements of each Service component to use their logistical assets and stocks in support of their mission.⁴⁷

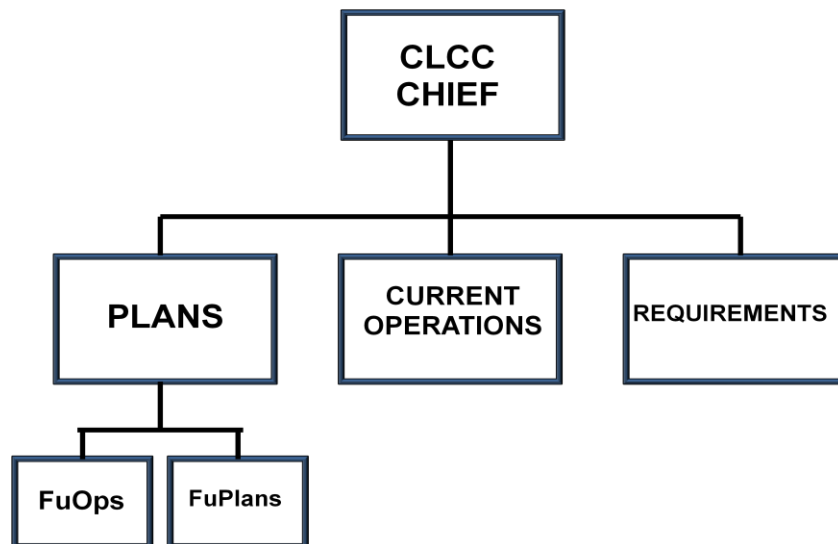
11. *Documented Joint Logistics Procedures*: This function is fully supportable with the Army ESC because the contingency-activated *JFSCC* is designed on an existing base organization. The organization would maintain one SOP for its Army-specific mission when it operates independently and a second, joint SOP to be used when operating with the additional augmentation as a Joint Force Support Component Command.⁴⁸
12. *Coordinated Operational and Centralized Contracting Support*: This function is fully supported by the Contracting Support Brigade organic to the TSC/ESC. The function is enhanced through the ability to integrate all Service component requirements through a single contracting agent.⁴⁹
13. *Single Logistics Agent with Flexible and Responsive Organizational Structure*: This critical function is fully supported by the synchronizing capabilities of a robustly-augmented *Joint Force Support Component Command*, with integrated logistics and distribution processes and the ability to conduct combined and joint logistical planning.
14. *Effective OPS/LOG Coordination and Integration*: The *JFSCC* design is exceptionally capable of exceeding this requirement. This efficient integration occurs through linkage of the *JFSCC* Support Operations, J3 and Service component LNOs in the Fusion Center. This linkage is further enhanced through coordination with the

Joint Force J4 and J3 for synchronization with the Joint Force Commander's objectives.

15. Improved Cross-Component Collaboration: With Service component requirements and capabilities visible in the *JFSCC* Fusion Center, the organization is well poised to facilitate coordination and collaboration amongst the Services for improved prioritization of critical support requirements and more efficient tracking and distribution of supplies and assets.

Option 3, *Joint Force Support Component Command*, supports all fifteen of the USJFCOM critical joint logistics C2 functions. The ESC has tremendous organic capability for command and control of Army logistics units and with crisis-activated augmentation of a DDOC and sister-Service component personnel for the formulation of a *JFSCC*, the capability expands dramatically.

Option 4: Combined Logistics Coordination Center (CLCC)



The *Combined Logistics Coordination Center* is a crisis-activated, ad hoc organization designed to support logistics synchronization between joint and combined forces. It serves as a conduit to address requirements from organizations whose logistical needs surpass their own ability to organically support themselves.⁵⁰ The *CLCC* design is comprised of a Chief and three subordinate divisions: Plans, Current Operations, and Requirements. The *CLCC* Chief reports directly to the J4, but the *CLCC* is not designed to be part of the *J4 Plus DDOC* or *Enhanced J4* structures. It is designed to be a stand-alone organization with a coordination line to the J4.⁵¹

Reviewing the *CLCC*'s ability to execute USJFCOM's critical joint logistics functions:

1. *Centralized Joint Planning*: This function is problematic in this design because the *CLCC* is a separate organization with only a *coordination* to the J4 and Service component logistical activities. Through boards, centers and cells, and management of the LOG COP, the *CLCC* can collaborate in logistical planning but it is not the source of centralized logistical planning to support operations. This function is not supported.⁵²
2. *Efficient Adjudication of Conflicting Priorities*: This function is only partially supported because the *CLCC* Chief can only make recommendations to the J4 concerning the re-allocation or re-prioritization of logistical supplies and assets. The J4, in coordination with the J3, can direct Service components to support the re-prioritization of logistics support requirements.

3. Maintenance of Joint Logistics Situational Awareness: This function is fully supported by the CLCC through its participation in boards, centers and cells, and maintenance of the LOG COP. Awareness would be enhanced through the addition of Service component STAMIS and operators, as well as coalition partners adding their status to the overall LOG COP.
4. Timely ID of Requirements and Shortfalls: The CLCC is at its best supporting this function because its Requirements Division is tied to Service components and coalition partners to identify requirements that cannot be fulfilled by individual units.
5. Maintaining a Clear Understanding of Component Capabilities: The ability of the CLCC to perform this function is related to the augmentation it receives from supported Service components and coalition partners. Accordingly, this function is assessed as capable.
6. Ability to Synchronize Component Logistical Capabilities: This function is supported because the CLCC is linked to Service components via the LOG COP and boards, centers and cells and has a Plans Division to plan the synchronization of logistical support across Service components and coalition partners.
7. Integrated Logistics Processes: This design option performs this function adequately since the manning of the CLCC staff can be diversified by Service component personnel to collectively comprehend and integrate component logistics processes.
8. Integrated Distribution Processes: This function is not supported because the CLCC is not directly linked to the DDOC.
9. Cross-Component Asset Visibility: This function is supportable within the CLCC with linkage to Service component and coalition STAMIS and operators qualified to

access the information. It allows CLCC planners to better understand what assets are available from the supported Service components and coalition partners.

10. Improved Capability to Direct Resources: This function is not supported because the CLCC does not have the authority to publish orders directing the Services and coalition partners to execute functions.
11. Documented Joint Logistics Procedures: This function can be problematic since the CLCC is an ad hoc design without a full time base organization to develop, refine and publish Standing Operating Procedures. It is not supported.⁵³
12. Coordinated Operational and Centralized Contracting Support: This function is not supported because the CLCC does not have C2 of contracting support assets.
13. Single Logistics Agent with Flexible and Responsive Organizational Structure: This function is not supported by the CLCC design because it still requires the oversight of the J4 for linkage to the J3 and Joint Force Commander for guidance.⁵⁴
14. Effective OPS/LOG Coordination and Integration: This function is problematic without a direct link to the operations planners in the J3. The CLCC is fully capable of coordinating and integrating logistics functions but it lacks the ability to coordinate with operational planners without input and guidance from the J4.
15. Improved Cross-Component Collaboration: This function is supported through interaction with the Service components; however, the extent of its effectiveness is tied to its ability to maintain comprehensive component asset visibility.

Option 4, *Combined Logistics Coordination Center*, supports seven of the fifteen USJFCOM critical joint logistics C2 functions. *Centralized Joint Planning* is not supported because the *CLCC* is not directly tied to the J3 planners. *Efficient Adjudication of Conflicting Priorities* is not supported because the *CLCC* does not have the authority to issue orders to the Service components. For the same reason, it cannot adequately support *Improved Capability to Direct Resources*. The *CLCC* is not linked to the DDOC so it cannot C2 an *Integrated Distribution System*. It is an ad hoc organization without a full time base organization so maintaining *Documented Joint Logistics Procedures* would be a challenge. It does not have oversight of *Coordinated Operational and Centralized Contract Support* so this function is not supported. It is not linked to the Joint Force J3 so *Effective Joint OPS/LOG Coordination and Integration* would be a challenge. Finally, the *Single Logistics Agent with Flexible and Responsive Organizational Structure* function is not supported because the *CLCC* is only a *coordination* element without command or staff authority. It would still defer to the Joint Force J4 for guidance and adjudication authority.

Summary

Critical Joint Logistic Command and Control Functions	J4 PLUS DDOC	ENHANCED J4	JFSCC	CLCC
1. Centralized Joint Planning	YES	YES	YES	NO
2. Efficient Adjudication of Conflicting Priorities	YES	YES	YES	NO
3. Maintenance of Situational Awareness	YES	YES	YES	YES
4. Timely ID of Requirements and Shortfalls	YES	YES	YES	YES
5. Clear Understanding of Component Capabilities	YES	YES	YES	YES
6. Ability to Synchronize Component Logistics Capabilities	NO	YES	YES	YES
7. Integrated Logistics Processes	NO	YES	YES	YES
8. Integrated Distribution System	YES	YES	YES	NO
9. Cross-Component Asset Visibility	NO	YES	YES	YES
10. Improved Capability to Direct Resources	YES	YES	YES	NO
11. Documented Joint Logistics Procedures	YES	YES	YES	NO
12. Coordinated Operational and Centralized Contracting Support	NO	NO	YES	NO
13. Single Log Agent with Flexible and Responsive Org Structure	YES	YES	YES	NO
14. Effective Joint OPS/LOG Coordination and Integration	YES	YES	YES	NO
15. Cross-Component Collaboration	YES	YES	YES	YES
Number of functions fully supported:	12	14	15	7

Comparison Matrix of Joint Logistics Organizational Structures Capability to Support Critical Joint Logistics Command and Control Functions

In a side-by-side comparison of each organization's ability to support the critical joint logistics functions identified by USJFCOM, the *Enhanced J4* and the *JFSCC* designs fair the best. The common characteristic which provides the distinct advantage is improved collaboration and situational awareness capabilities through a Fusion Center or Cell.⁵⁵ This construct, which has links to both internal components of the organization as well as supported Service components and supporting national partners facilitates a comprehensive common operating picture for current operations and future

planning.⁵⁶ Additionally, both have a clearly defined hierarchy with established decision-making authority to adjudicate conflicts and provide guidance. Further, building on the base of an existing organization proves beneficial in reduction of time to establish operations and a more seamless integration of augmenting personnel to establish full capacity.⁵⁷

The integration of a DDOC in the *J4* and *JFSCC* models provides a distinct advantage over the *CLCC* design, due to the latter's lack of linkage with distribution authority and situational awareness of in-transit visibility.⁵⁸ Further, the *CLCC*'s role as a coordinator rather than a true logistics C2 agent hinders its ability to adjudicate conflicts and authoritatively direct resources. Lastly, the *CLCC* is detached from operational planning in the J3 and relies on the J4 planners and Service component liaison officers to provide information for future operational plans and potential support requirements.⁵⁹

Both the *Enhanced J4* design and the *JFSCC* design are capable of performing the required critical joint logistics C2 functions identified by USJFCOM, but the ability to *Coordinate Operational and Centralized Contracting Support* is limited in the *Enhanced J4* design dependent on C2 linkage between the J4 and the assigned contracting activity.⁶⁰ The Joint Force Commander can choose either the Staff option (*Enhanced J4*) or the Command option (*JFSCC*) to serve as his single logistics agent to control his joint logistics war-fighting function. In a contingency where a Service component cannot provide a suitable senior logistics headquarters to serve as a *JFSCC*, the *Enhanced J4* design is more than capable to meet the needs.⁶¹ Additionally, use of a basic *CLCC* design to augment the J4 staff and handle Service component and coalition partner

requirements would further strengthen the *Enhanced J4* design, especially if the *CLCC* addressed consolidated contracting support requirements.

Conclusion

The joint logistics doctrine addressed in JP 4.0 is designed to provide the Joint Force Commander with flexible and adaptable options to tailor logistics support for a wide range of contingencies and force compositions. It is formulated to promote efficiencies in the form of reduced infrastructure and the sharing of logistical assets and capabilities across Service components and, where legal and practicable, coalition partners. USC Title 10, Chapter 6 and DoD Directive 5101.1 provide authoritative guidance concerning Service component responsibilities for the management of logistics capabilities, and DoDI 4000.19 provides the legal framework for the sharing of logistics through inter-service and intra-governmental support.⁶²

Long experience shows that operators, regardless of parent agency, collaborate closely when faced with common challenges in the field: they often resolve interagency concerns quickly and seamlessly to achieve team objectives.⁶³

As the excerpt from the 2006 *Quadrennial Defense Review Report* infers, the benefits of joint operations are well-documented and consistently prove beneficial for the collective military effort. Bringing logisticians doctrinally together as a joint force garners the same benefit. Logistics, however, is tied to money and money is tied to law, so in the execution of joint logistics, the crossing of Service component lines of accounting is much more complicated.⁶⁴ A keen understanding of the entire logistics common operating picture has never been more critical than in today's extended lines of communication and diminishing resources. The Joint Force Commander must carefully consider his options for the best single logistics agent to support his force. Additionally,

he must clearly articulate to his assigned Service component commanders that his J4 or JFSCC Commander speaks for him when planning, executing and adjudicating joint logistics priorities. Using either the Command or Staff logistics C2 model, the Joint Force Commander can strengthen his operational flexibility through enhanced logistical capability.⁶⁵

Endnotes

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